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(54) **INTEGRATION SYSTEM PROVIDING CONVERSATION MESSAGES AND SOCIAL NETWORK POSTS BY CONVERSATION MESSAGE AUTHORS TO CLIENT**

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(73) Assignee: **GOOGLE INC.**, Moutain View, CA (US)

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H04L 12/58 (2006.01)

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CPC ***H04L 51/16*** (2013.01); ***H04L 51/32*** (2013.01)

(58) **Field of Classification Search**
CPC H04L 51/00; H04L 51/16; H04L 51/32; H04L 51/36
USPC 709/206, 207
See application file for complete search history.

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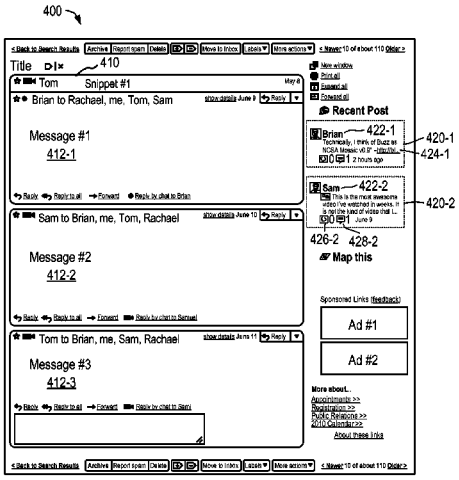
(57) **ABSTRACT**

A server system having one or more processors and memory storing one or more programs for execution by the one or more processors receives from a client device a request, the request comprising a request for message content from one or more email messages in a conversation thread. The server system responds to the request by identifying the message content, identifying candidate authors, and obtaining qualifying posts by the candidate authors, the qualifying posts satisfying predefined criteria. The server system furthermore selects a subset of the qualifying posts, and prepares the selected subset of the qualifying posts and the message content for concurrent display at the client device.

25 Claims, 10 Drawing Sheets



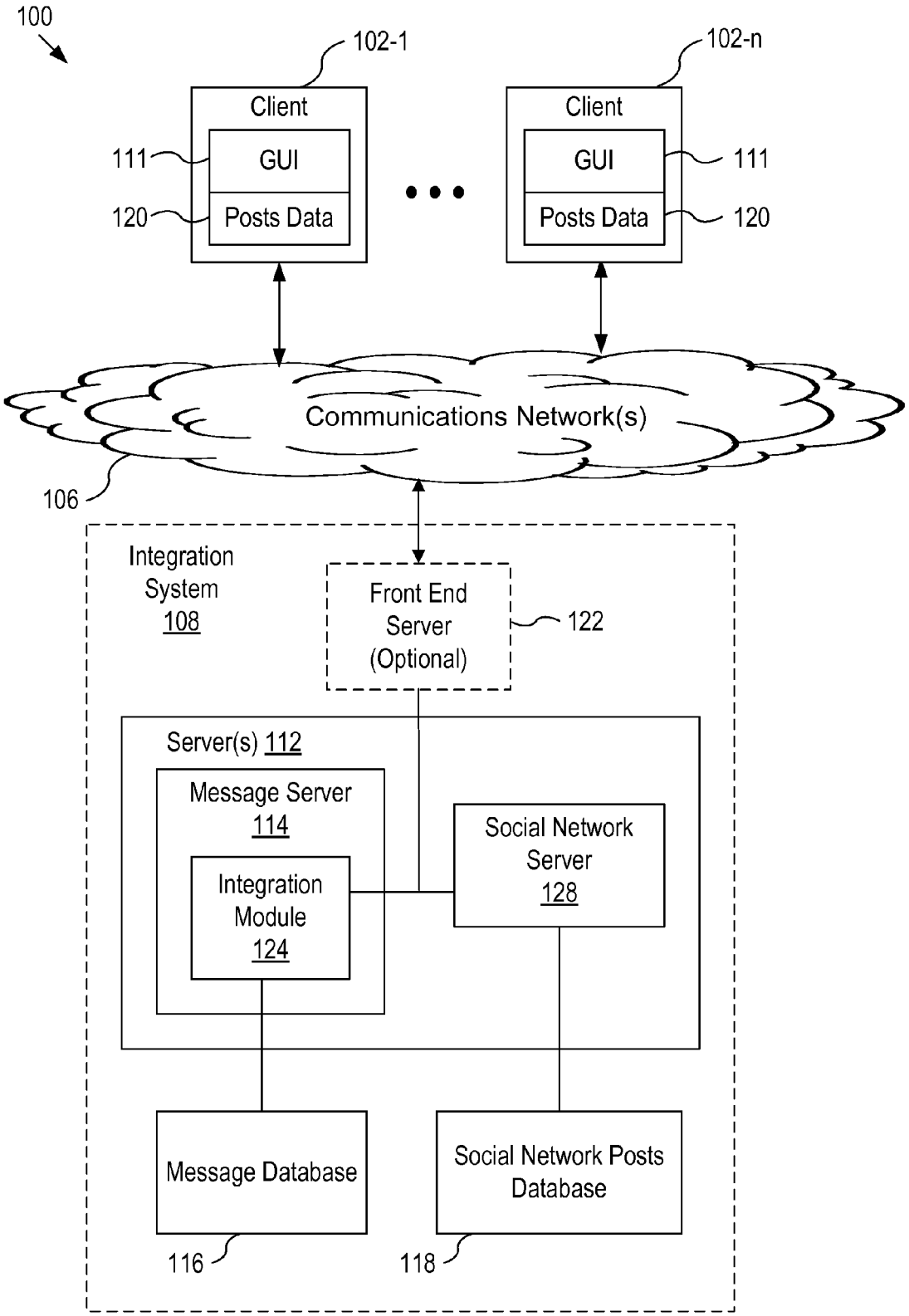

100
102-1
102-n
Client
GUI
Posts Data
111
120
Client
GUI
Posts Data
111
120
Communications Network(s)
106
Integration System 108
Front End Server (Optional)
122
Server(s) 112
Message Server 114
Integration Module 124
Social Network Server 128
Message Database
Social Network Posts Database
116
118

Figure 1

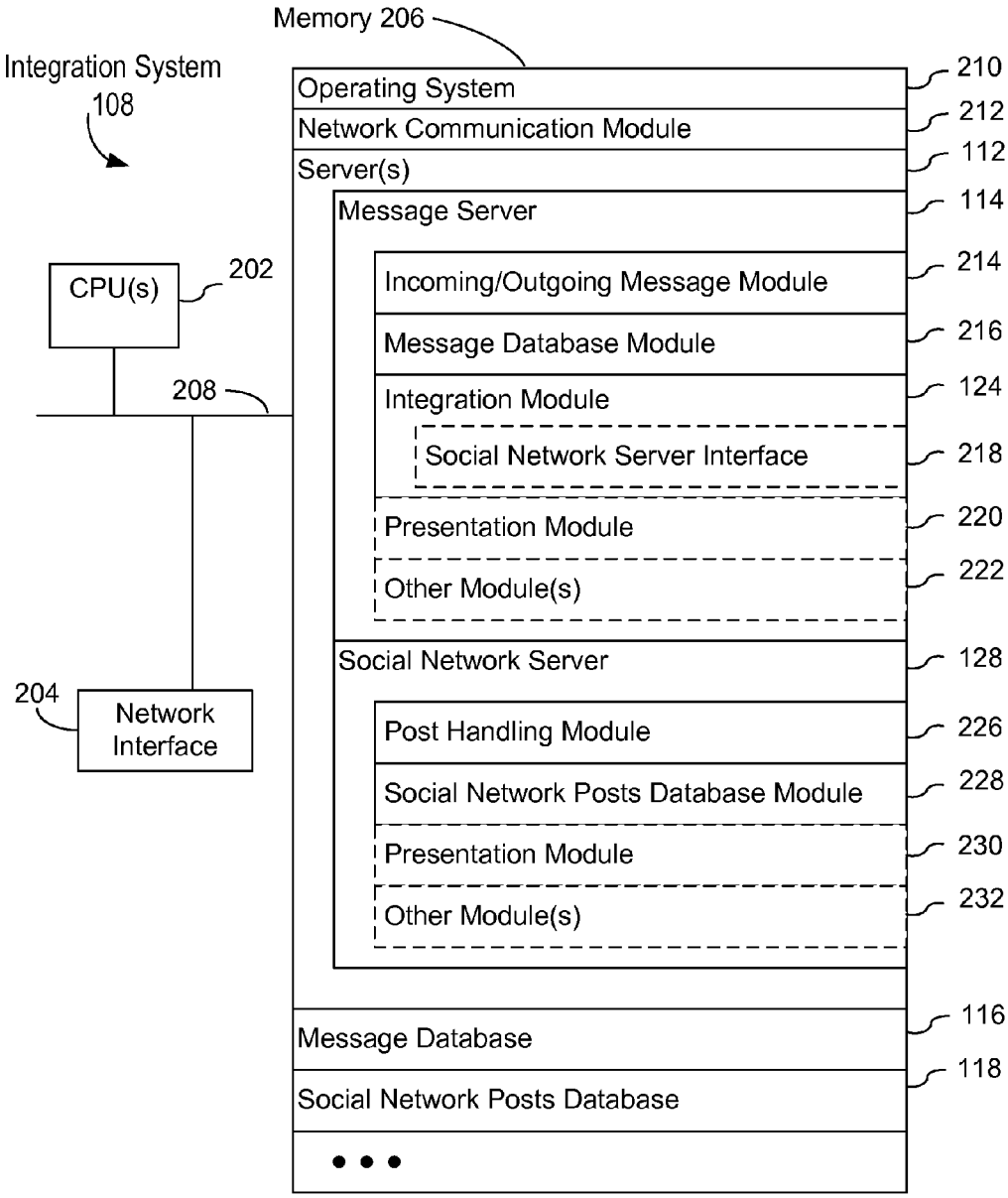

Memory 206
Integration System
108
Operating System
210
Network Communication Module
212
Server(s)
112
Message Server
114
Incoming/Outgoing Message Module
214
Message Database Module
216
Integration Module
124
Social Network Server Interface
218
Presentation Module
220
Other Module(s)
222
Social Network Server
128
Post Handling Module
226
Social Network Posts Database Module
228
Presentation Module
230
Other Module(s)
232
CPU(s)
202
208
204
Network Interface
Message Database
116
Social Network Posts Database
118

Figure 2

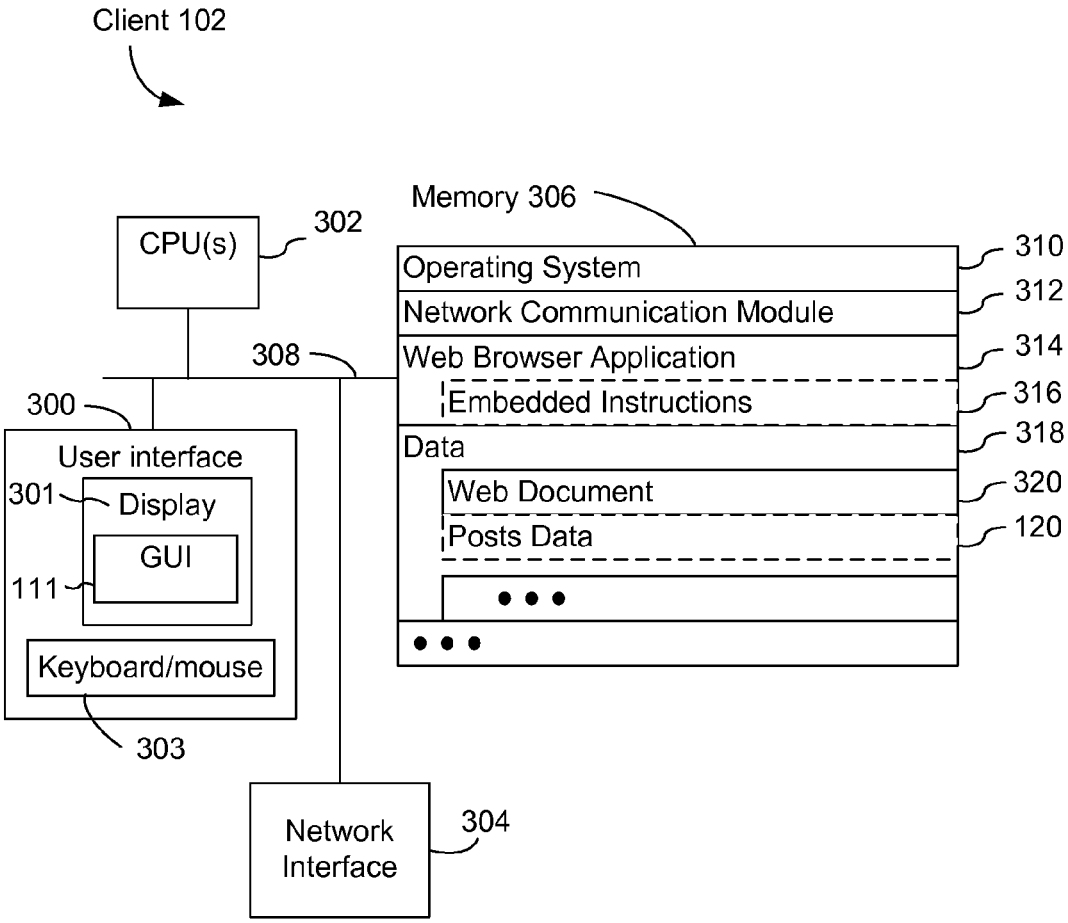

Client 102
CPU(s)
302
Memory 306
Operating System
310
Network Communication Module
312
308
Web Browser Application
314
Embedded Instructions
316
300
Data
318
User interface
Web Document
320
301
Display
Posts Data
120
GUI
111
Keyboard/mouse
303
Network Interface
304

Figure 3

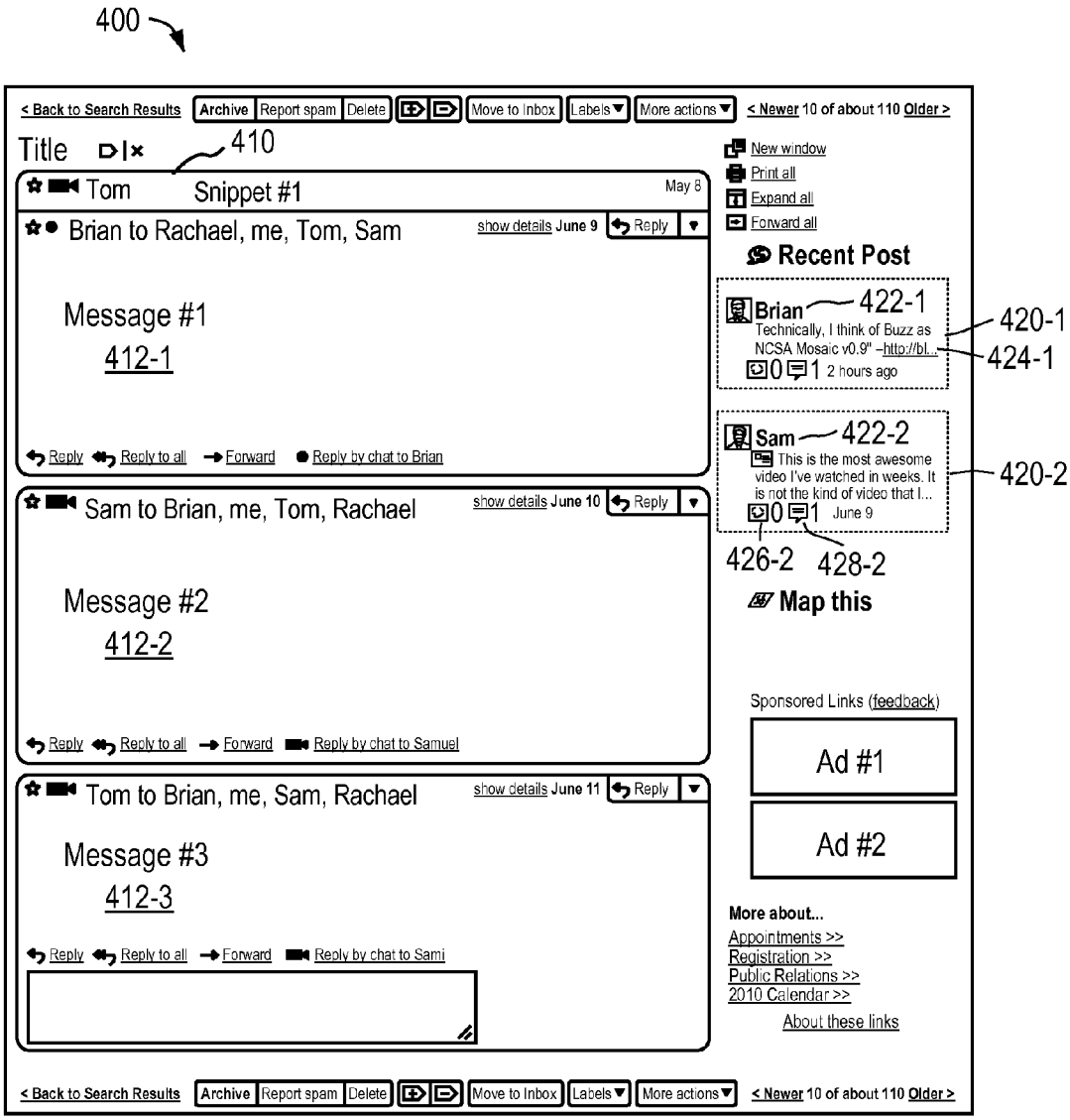

400
< Back to Search Results
Archive
Report spam
Delete
Move to Inbox
Labels
More actions
< Newer 10 of about 110 Older >
Title
410
Tom
Snippet #1
May 8
Brian to Rachael, me, Tom, Sam
show details June 9
Reply
Message #1
412-1
Reply
Reply to all
Forward
Reply by chat to Brian
Sam to Brian, me, Tom, Rachael
show details June 10
Reply
Message #2
412-2
Reply
Reply to all
Forward
Reply by chat to Samuel
Tom to Brian, me, Sam, Rachael
show details June 11
Reply
Message #3
412-3
Reply
Reply to all
Forward
Reply by chat to Sami
New window
Print all
Expand all
Forward all
Recent Post
Brian
422-1
Technically, I think of Buzz as NCSA Mosaic v0.9" –http://bl...
0 1 2 hours ago
420-1
424-1
Sam
422-2
This is the most awesome video I've watched in weeks. It is not the kind of video that I...
0 1 June 9
420-2
426-2
428-2
Map this
Sponsored Links (feedback)
Ad #1
Ad #2
More about...
Appointments >>
Registration >>
Public Relations >>
2010 Calendar >>
About these links
< Back to Search Results
Archive
Report spam
Delete
Move to Inbox
Labels
More actions
< Newer 10 of about 110 Older >

Figure 4

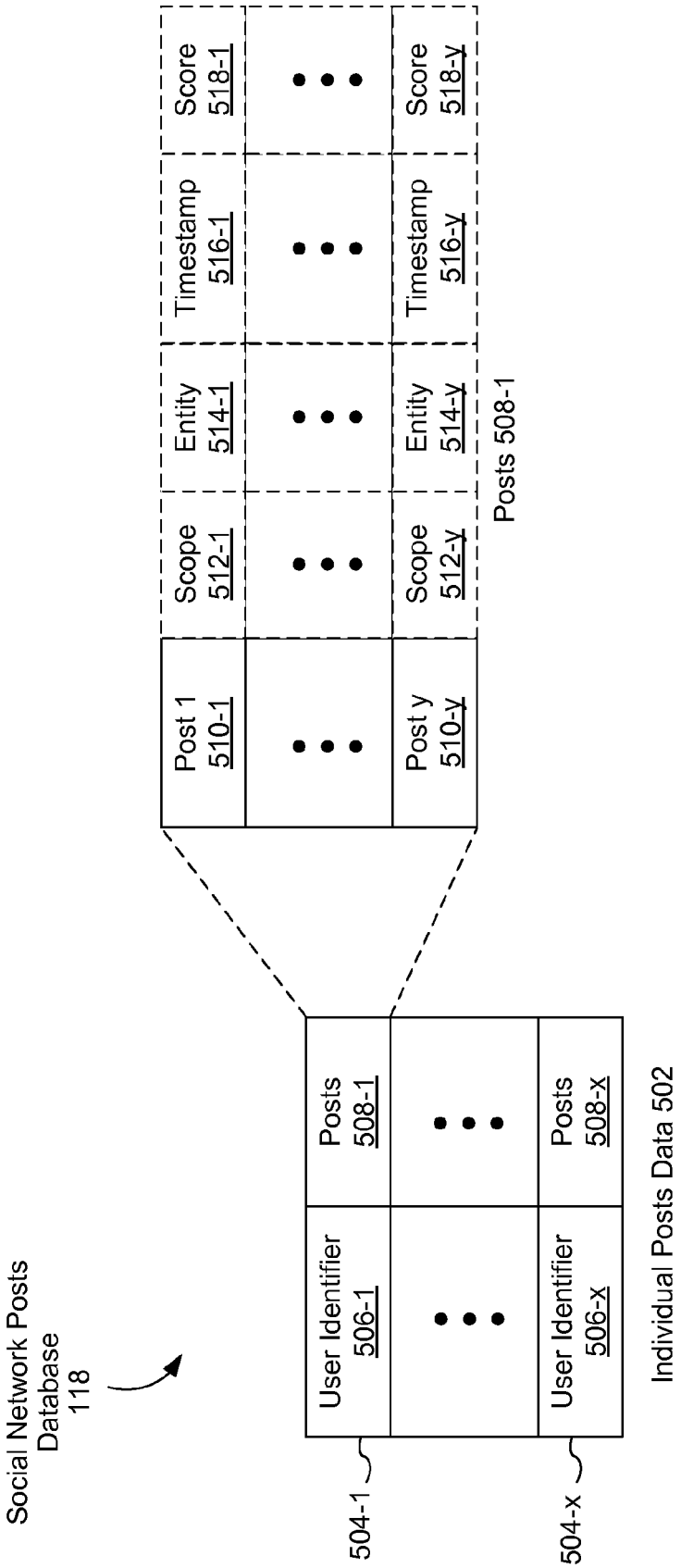

Social Network Posts Database 118
User Identifier 506-1
Posts 508-1
User Identifier 506-x
Posts 508-x
504-1
504-x
Individual Posts Data 502
Post 1 510-1
Post y 510-y
Scope 512-1
Scope 512-y
Entity 514-1
Entity 514-y
Timestamp 516-1
Timestamp 516-y
Score 518-1
Score 518-y
Posts 508-1

Figure 5A

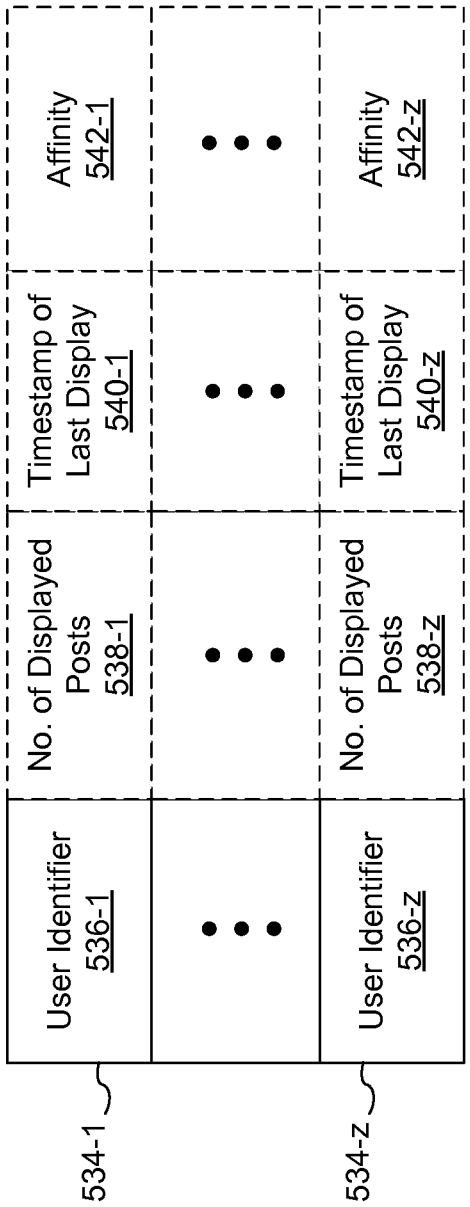

User Identifier 536-1
No. of Displayed Posts 538-1
Timestamp of Last Display 540-1
Affinity 542-1
User Identifier 536-z
No. of Displayed Posts 538-z
Timestamp of Last Display 540-z
Affinity 542-z
534-1
534-z
Displayed Posts Data 120

Figure 5B

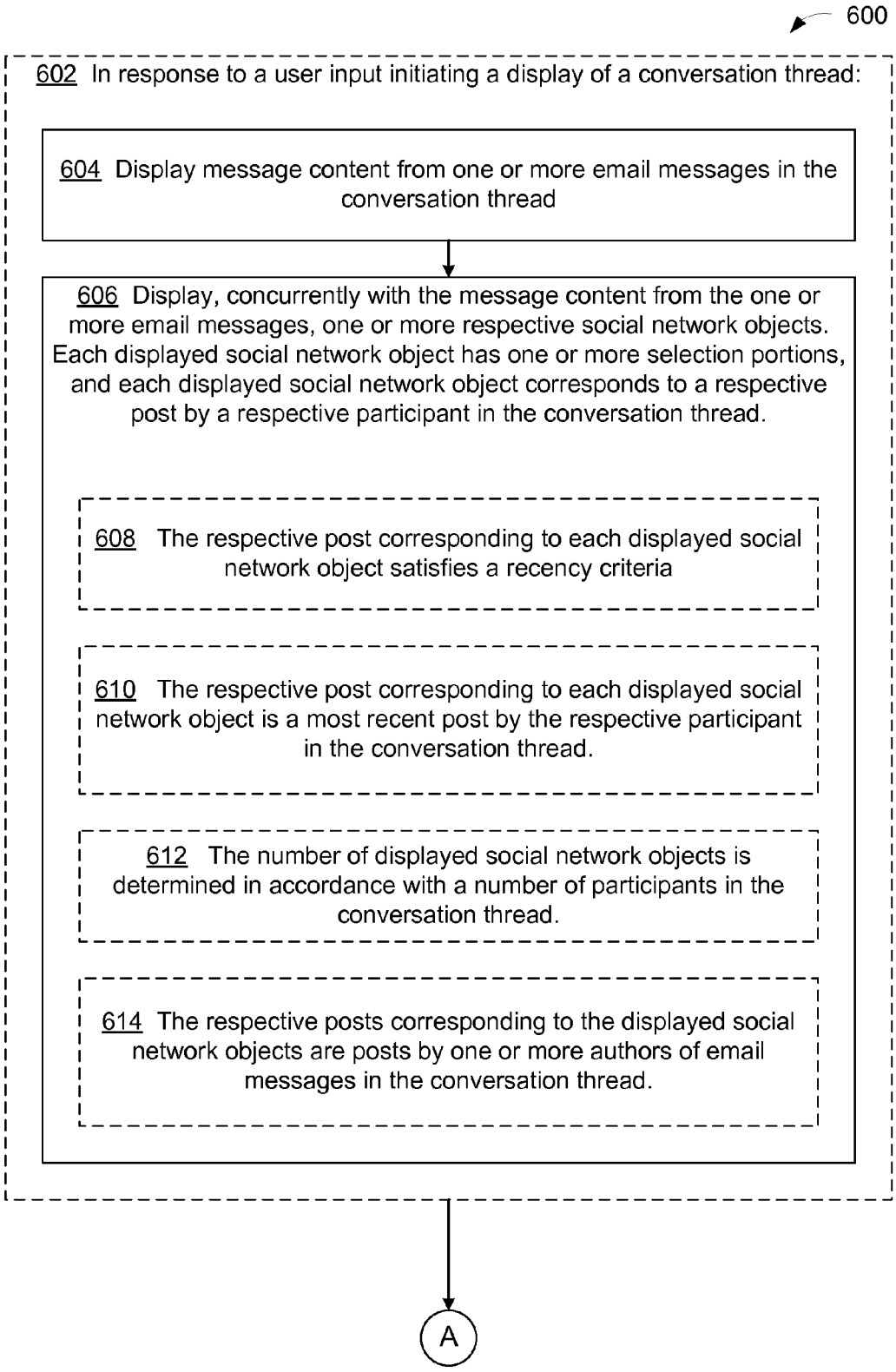

600
602 In response to a user input initiating a display of a conversation thread:
604 Display message content from one or more email messages in the conversation thread
606 Display, concurrently with the message content from the one or more email messages, one or more respective social network objects. Each displayed social network object has one or more selection portions, and each displayed social network object corresponds to a respective post by a respective participant in the conversation thread.
608 The respective post corresponding to each displayed social network object satisfies a recency criteria
610 The respective post corresponding to each displayed social network object is a most recent post by the respective participant in the conversation thread.
612 The number of displayed social network objects is determined in accordance with a number of participants in the conversation thread.
614 The respective posts corresponding to the displayed social network objects are posts by one or more authors of email messages in the conversation thread.
A

Figure 6A

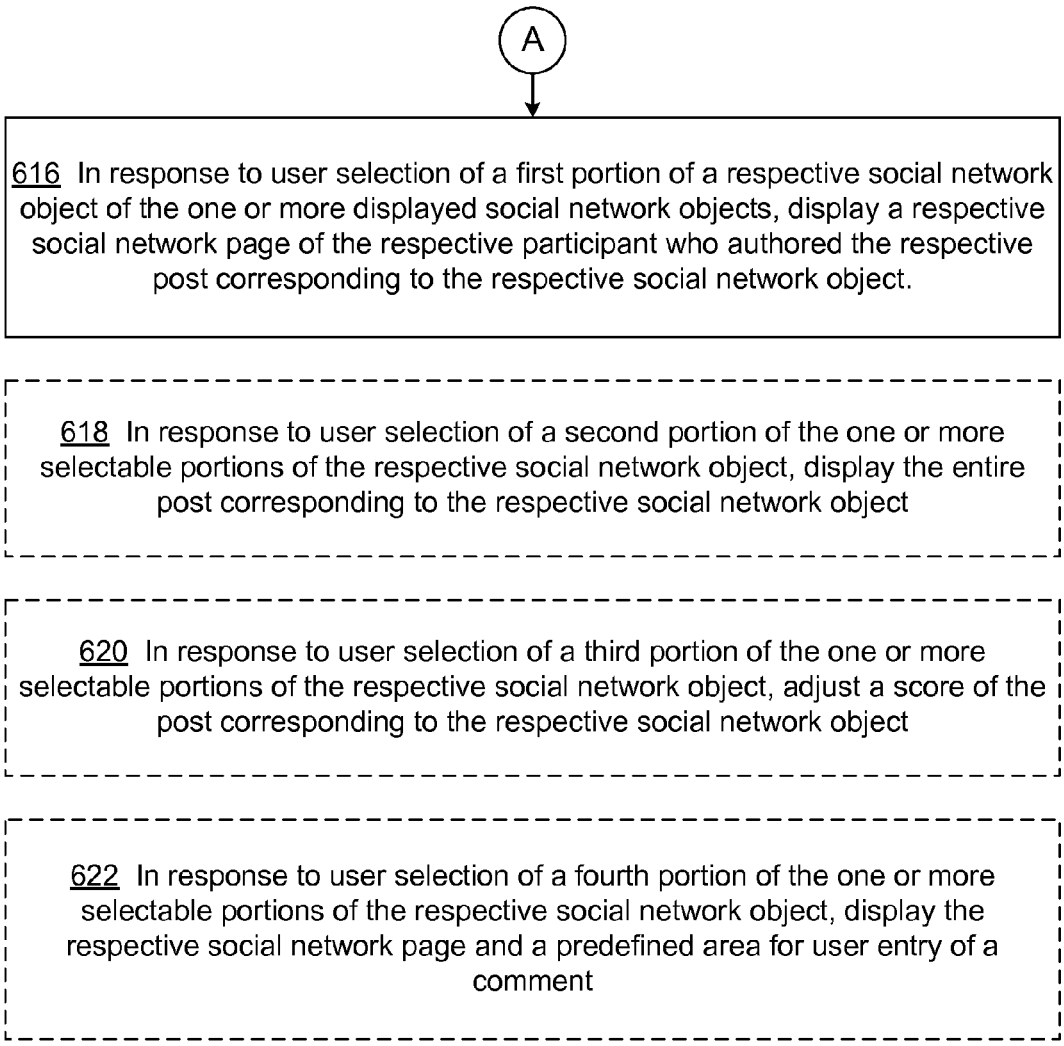

A
616 In response to user selection of a first portion of a respective social network object of the one or more displayed social network objects, display a respective social network page of the respective participant who authored the respective post corresponding to the respective social network object.
618 In response to user selection of a second portion of the one or more selectable portions of the respective social network object, display the entire post corresponding to the respective social network object
620 In response to user selection of a third portion of the one or more selectable portions of the respective social network object, adjust a score of the post corresponding to the respective social network object
622 In response to user selection of a fourth portion of the one or more selectable portions of the respective social network object, display the respective social network page and a predefined area for user entry of a comment

Figure 6B

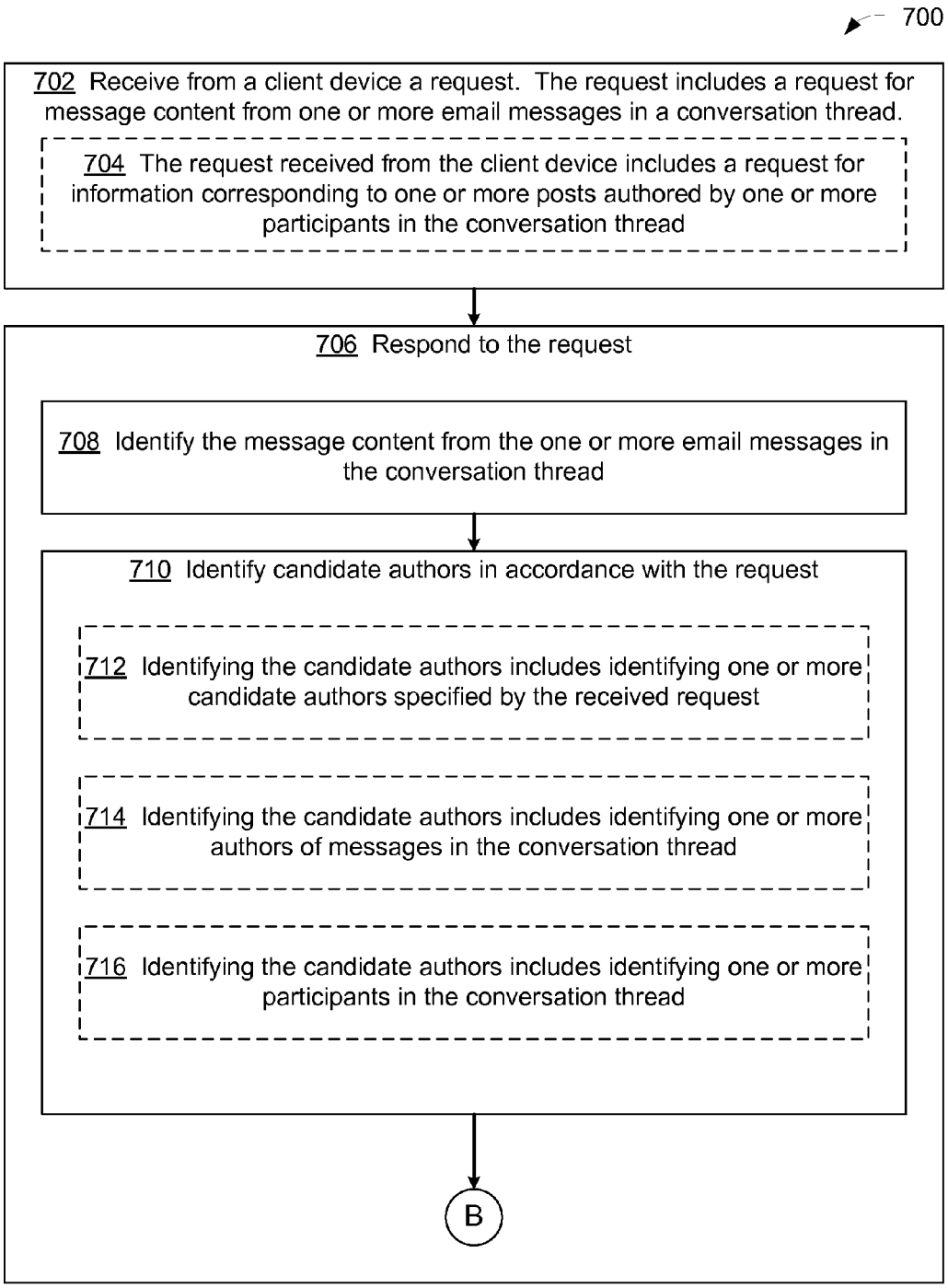

700
702 Receive from a client device a request. The request includes a request for message content from one or more email messages in a conversation thread.
704 The request received from the client device includes a request for information corresponding to one or more posts authored by one or more participants in the conversation thread
706 Respond to the request
708 Identify the message content from the one or more email messages in the conversation thread
710 Identify candidate authors in accordance with the request
712 Identifying the candidate authors includes identifying one or more candidate authors specified by the received request
714 Identifying the candidate authors includes identifying one or more authors of messages in the conversation thread
716 Identifying the candidate authors includes identifying one or more participants in the conversation thread
B

Figure 7A

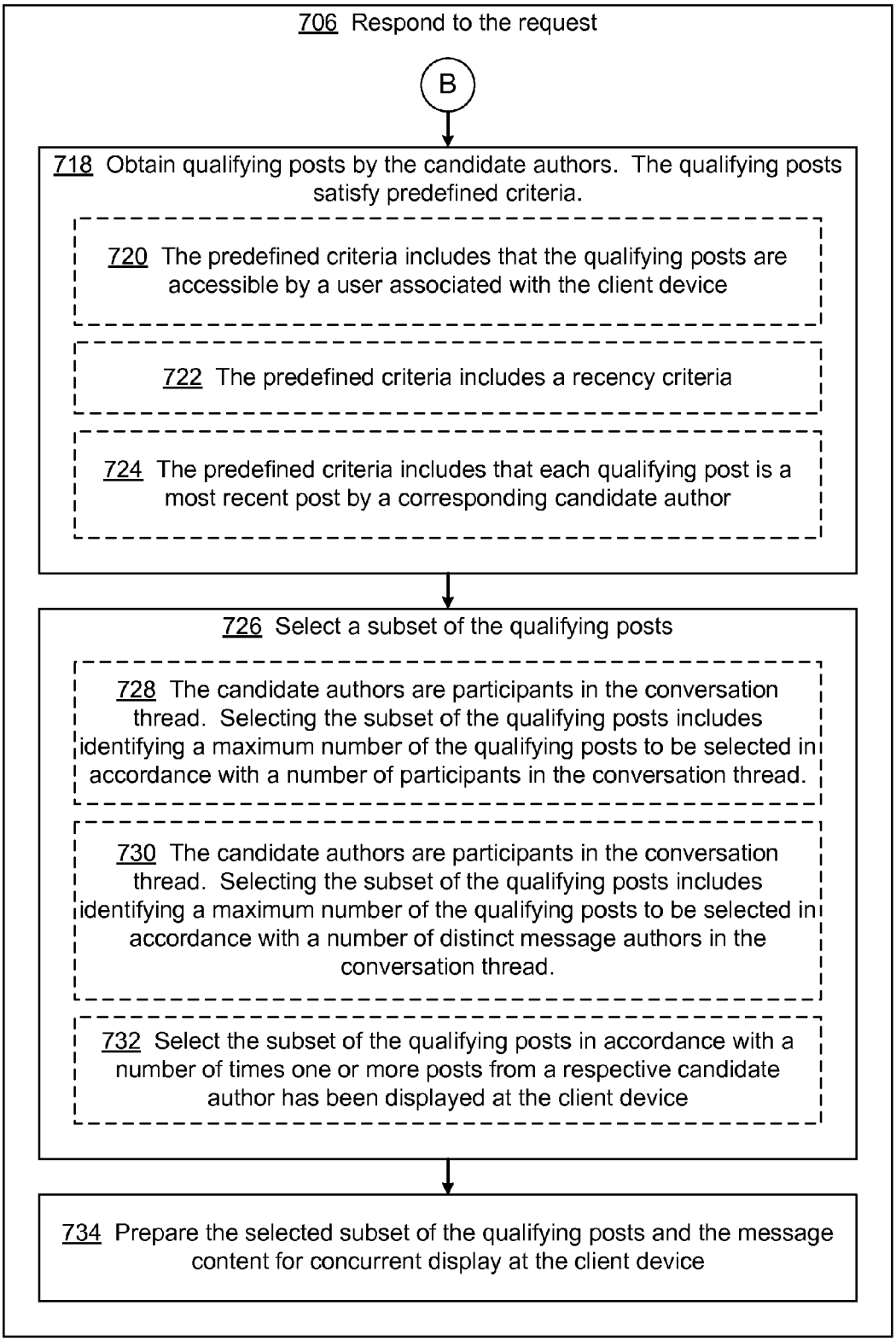

706 Respond to the request
B
718 Obtain qualifying posts by the candidate authors. The qualifying posts satisfy predefined criteria.
720 The predefined criteria includes that the qualifying posts are accessible by a user associated with the client device
722 The predefined criteria includes a recency criteria
724 The predefined criteria includes that each qualifying post is a most recent post by a corresponding candidate author
726 Select a subset of the qualifying posts
728 The candidate authors are participants in the conversation thread. Selecting the subset of the qualifying posts includes identifying a maximum number of the qualifying posts to be selected in accordance with a number of participants in the conversation thread.
730 The candidate authors are participants in the conversation thread. Selecting the subset of the qualifying posts includes identifying a maximum number of the qualifying posts to be selected in accordance with a number of distinct message authors in the conversation thread.
732 Select the subset of the qualifying posts in accordance with a number of times one or more posts from a respective candidate author has been displayed at the client device
734 Prepare the selected subset of the qualifying posts and the message content for concurrent display at the client device

Figure 7B

INTEGRATION SYSTEM PROVIDING CONVERSATION MESSAGES AND SOCIAL NETWORK POSTS BY CONVERSATION MESSAGE AUTHORS TO CLIENT

RELATED APPLICATIONS

This application a continuation of U.S. application Ser. No. 13/218,724, filed Aug. 26, 2011, which claims priority to U.S. Provisional Application Ser. No. 61/501,118, filed Jun. 24, 2011, entitled "Integration System Providing Conversation Messages and Social Network Posts by Conversation Message Authors to Client," which are incorporated by reference herein in their entirety.

This application is related to U.S. patent application Ser. No. 13/218,714, filed Aug. 26, 2011, entitled "Concurrent Display of Conversation Messages and Social Network Posts by Conversation Message Authors," which is incorporated by reference herein in its entirety.

TECHNICAL FIELD

The disclosed embodiments relate generally to displaying social network posts. More particularly, the disclosed embodiments relate to methods and systems for concurrently displaying conversation messages and social network posts.

BACKGROUND

Electronic messages are widely used as communication media, as more people gain access to computer networks (e.g., the Internet) and people use computer networks for more activities. In addition, more people post comments or share items (e.g., web pages, products, or comments made by other users) online. However, existing methods are not efficient at displaying user comments or shared items.

SUMMARY

Accordingly, there is a need for a new method and system for displaying the user comments and/or shared items.

A number of embodiments (e.g., of server systems, client systems or devices, and methods of operating such systems or devices) that overcome the limitations and disadvantages described above are presented in more detail below. These embodiments provide methods, systems, and graphical user interfaces (GUIs) for displaying user-generated data (e.g., posts or annotations).

As described in more detail below, some embodiments involve a method performed by a client device that has one or more processors and memory storing one or more programs for execution by the one or more processors. The method includes displaying message content from one or more email messages in a conversation thread; and displaying, concurrently with the message content from the one or more email messages, one or more respective social network objects. Each displayed social network object has one or more selection portions, and each displayed social network object corresponds to a respective post by a respective participant in the conversation thread. The method includes, in response to selection of a first portion of a respective social network object of the one or more displayed social network objects, displaying a respective social network page of the respective participant who authored the post corresponding to the respective social network object.

In accordance with some embodiments, a method is performed by a client device that has one or more processors and memory storing one or more programs for execution by the one or more processors. The method includes displaying message content from one or more email messages; and displaying, concurrently with the message content from the one or more email messages, one or more respective social network objects. Each displayed social network object has one or more selection portions, and each displayed social network object corresponds to a respective post by a respective participant in the one or more email messages. The method includes, in response to selection of a first portion of a respective social network object of the one or more displayed social network objects, displaying a respective social network page of the respective participant who authored the respective post corresponding to the respective social network object.

In accordance with some embodiments, a method is performed by a server that has one or more processors and memory storing one or more programs for execution by the one or more processors. The method includes receiving from a client device a request. The request includes a request for message content from one or more email messages in a conversation thread. The method includes responding to the request by: identifying the message content from the one or more email messages in the conversation thread; identifying candidate authors in accordance with the request; obtaining qualifying posts by the candidate authors, where the qualifying posts satisfy predefined criteria; selecting a subset of the qualifying posts; and preparing the selected subset of the qualifying posts and the message content for concurrent display at the client device.

In accordance with some embodiments, a method is performed by a server that has one or more processors and memory storing one or more programs for execution by the one or more processors. The method includes receiving from a client device a request. The request includes a request for message content from one or more email messages. The method includes responding to the request by: identifying the message content from the one or more email messages; identifying candidate authors in accordance with the request; obtaining qualifying posts by the candidate authors, where the qualifying posts satisfy predefined criteria; and preparing a subset of the qualifying posts and the message content for concurrent display at the client device.

In accordance with some embodiments, a computer system comprises one or more processors for executing programs and memory storing one or more programs for execution by the one or more processors. The one or more programs include instructions to perform any of the aforementioned methods.

In accordance with some embodiments, a non-transitory computer readable storage medium stores one or more programs configured for execution by one or more processors of a computer system. The one or more programs include instructions for performing any of the aforementioned methods.

In accordance with some embodiments, a computer system includes one or more processors; and memory storing one or more programs for execution by the one or more processors. The one or more programs include instructions for receiving from a client device a request, the request comprising a request for message content from one or more email messages in a conversation thread. The one or more programs also include instructions for responding to the request by: identifying the message content from the one or more email messages in the conversation thread; identifying candidate authors in accordance with the request; obtaining qualifying posts by the candidate authors, the qualifying posts satisfying predefined criteria; selecting a subset of the qualifying posts;

and preparing the selected subset of the qualifying posts and the message content for concurrent display at the client device.

In accordance with some embodiments, a non-transitory computer readable storage medium stores one or more programs configured for execution by one or more processors of a computer system. The one or more programs include instructions for receiving from a client device a request, the request comprising a request for message content from one or more email messages in a conversation thread. The one or more programs also include instructions for responding to the request by: identifying the message content from the one or more email messages in the conversation thread; identifying candidate authors in accordance with the request; obtaining qualifying posts by the candidate authors, the qualifying posts satisfying predefined criteria; selecting a subset of the qualifying posts; and preparing the selected subset of the qualifying posts and the message content for concurrent display at the client device.

Thus, computer systems are provided with more efficient methods for displaying message content and social network objects, thereby increasing the effectiveness and efficiency in sharing information among multiple users. Such methods may complement or replace conventional methods for displaying message content.

BRIEF DESCRIPTION OF THE DRAWINGS

For a better understanding of the disclosed embodiments, reference should be made to the Description of Embodiments below, in conjunction with the following drawings in which like reference numerals refer to corresponding parts throughout the figures.

FIG. **1** is a block diagram illustrating an exemplary distributed computer system, in accordance with some embodiments.

FIG. **2** is a block diagram illustrating an integration system, in accordance with some embodiments.

FIG. **3** is a block diagram illustrating a client, in accordance with some embodiments.

FIG. **4** illustrates an exemplary user interface displayed at a client, in accordance with some embodiments.

FIG. **5**A is a block diagram illustrating exemplary individual posts data, in accordance with some embodiments.

FIG. **5**B is a block diagram illustrating exemplary displayed posts data, in accordance with some embodiments.

FIGS. **6**A-**6**B are flowcharts representing a method of concurrently displaying message content and one or more social network objects, in accordance with some embodiments.

FIGS. **7**A-**7**B are flowcharts representing a method of preparing a set of qualifying posts and message content for concurrent display, in accordance with some embodiments.

DESCRIPTION OF EMBODIMENTS

Methods and systems for concurrently displaying message content and one or more social network objects are described. Reference will be made to certain embodiments, examples of which are illustrated in the accompanying drawings.

Moreover, in the following description, numerous specific details are set forth to provide a thorough understanding of the embodiments. However, it will be apparent to one of ordinary skill in the art that some embodiments may be practiced without these particular details. In other instances, methods, procedures, components, and networks that are well-known to those of ordinary skill in the art are not described in detail to avoid obscuring aspects of the embodiments described in this document.

It will also be understood that, although the terms first, second, etc. may be used herein to describe various elements, these elements should not be limited by these terms. These terms are only used to distinguish one element from another. For example, a first portion could be termed a second portion, and, similarly, a second portion could be termed a first portion. The first portion and the second portion are both portions, but they are not the same portion.

The terminology used in the description of the embodiments herein is for the purpose of describing particular embodiments only and is not intended to be limiting of the claims. As used in the description of the embodiments and the appended claims, the singular forms "a," "an," and "the" are intended to include the plural forms as well, unless the context clearly indicates otherwise. It will also be understood that the term "and/or" as used herein refers to and encompasses any and all possible combinations of one or more of the associated listed items. It will be further understood that the terms "comprises" and/or "comprising," when used in this specification, specify the presence of stated features, integers, steps, operations, elements, and/or components, but do not preclude the presence or addition of one or more other features, integers, steps, operations, elements, components, and/or groups thereof.

As used herein, the term "if" may be construed to mean "when" or "upon" or "in response to determining" or "in accordance with a determination" or "in response to detecting" that a stated condition precedent is true, depending on the context. Similarly, the phrase "if it is determined [that a stated condition precedent is true]" or "if [a stated condition precedent is true]" or "when [a stated condition precedent is true]" may be construed to mean "upon determining" or "in response to determining" or "in accordance with a determination," "upon detecting" or "in response to detecting" that the stated condition precedent is true, depending on the context.

As used herein, the term "URL" refers to a uniform resource locator, which is sometimes called a uniform resource identifier (URI).

FIG. **1** is a block diagram illustrating an exemplary distributed computer system **100**, according to certain embodiments. In FIG. **1**, system **100** includes one or more client computers **102**, communications network **106**, and integration system **108**. Various embodiments of the integration system **108** implement the methods described in this document.

Client computers **102** can be any of a number of computing devices (e.g., Internet kiosk, personal digital assistant, cell phone, gaming device, desktop computer, laptop computer, tablet computer, handheld computer, or combinations thereof) used to enable the activities described below. Client computer(s) **102** is also referred to herein as client(s), client device(s), or client system(s). Client **102** typically includes a graphical user interface (GUI) **111** and posts data **120**. Client **102** is described in greater detail below with reference to FIG. **3**. Client **102** is connected to integration system **108** via communications network **106**. As described in more detail below, GUI **111** is used to display message content and one or more social network objects.

Integration system **108** includes one or more servers, such as servers **112**, connected to communications network **106**. Optionally, servers **112** are connected to communications network **106** via front end server **122**. In some embodiments, front end server **122** conveys (and optionally parses) inbound requests to the appropriate server of integration system **108**,

and formats responses and/or other information being sent to clients in response to requests. Front end server **122**, if present, may be a web server providing web based access to integration system **108**. Front end server **122**, if present, may also route communications to and from other destinations, such as a remote online service server (e.g., a remote email server, remote social network server, etc.).

Integration system **108** typically includes message database **116** and social network posts database **118**. In some embodiments, integration system **108** also includes or has access to one or more other databases, such as a user information database (not shown) that includes user authentication information. In embodiments illustrated by FIG. **1**, servers **112** include message server **114** and social network server **128**. Message server **114** communicates with message database **116**, and social network server **128** communicates with social network posts database **118**. Respective servers **112** communicate with one or more respective databases internal to integration system **108**, such as message database **116** and social network posts database **118** using a local area network, by internal communication busses, or by any other appropriate mechanism or combination of mechanism.

Servers **112** are also referred to herein as a server system. Servers **112** communicate with other servers (e.g., a user authentication server (not shown)) and/or clients **102** via front end server **122** (if present) and communications network **106**. In some embodiments, communications network **106** is the Internet, other wide area network (WAN), metropolitan area network, local area network (LAN), or a combination of such networks.

Servers **112** also include application programs and/or modules that are executed by one or more of the servers to manage integration system **108**. In some embodiments, one or more servers in servers **112** include integration module **124**, which assists in integrating operations of multiple servers in the server(s) **112**. More generally, servers **112** are configured to manage certain aspects of integration system **108**, including transmitting data (including message content and one or more posts) to a respective client **102** for rendering at least a portion of the data on GUI **111** of the respective client **102**.

Optionally, integration system **108** is implemented as a system remote from message server **114** and/or social network server **128**.

The servers and modules shown in integration system **108** and servers **112** represent functions performed in certain embodiments. In some embodiments, fewer and/or additional servers, modules, functions or databases are included in integration system **108** and server(s) **112**.

FIG. **2** is a block diagram illustrating integration system **108** in accordance with some embodiments. Integration system **108** typically includes one or more processing units (sometimes called CPUs or processors) **202**, one or more network or other communications interfaces **204**, memory **206**, and one or more communication buses **208** for interconnecting these components. In some embodiments, communication buses **208** include circuitry (sometimes called a chipset) that interconnects and controls communications between system components. In some other embodiments, integration system **108** includes a user interface (not shown) (e.g., a user interface having a display device, a keyboard, and a mouse or other pointing device), but more typically integration system **108** is controlled from and accessed by various client systems (e.g., client **102**, FIG. **1**).

Memory **206** of integration system **108** includes high-speed random access memory, such as DRAM, SRAM, DDR RAM or other random access solid state memory devices; and typically also includes non-volatile memory, such as one or more magnetic disk storage devices, optical disk storage devices, flash memory devices, or other non-volatile solid state storage devices. Memory **206** optionally includes one or more storage devices remotely located from the processor(s) **202**. Memory **206**, or alternately the non-volatile memory device(s) within memory **206**, comprises a non-transitory computer readable storage medium for storing information. In some embodiments, memory **206** or the computer readable storage medium of memory **206** stores the following programs, modules and data structures, or a subset thereof:

- Operating System **210**, which includes procedures for handling various basic system services and for performing hardware dependent tasks;
- Network Communication Module (or instructions) **212**, which is used for connecting integration system **108** to other computers (e.g., clients **102** or any remote servers) via one or more communications interfaces **204** and one or more communications networks **106** (FIG. **1**), such as the Internet, other wide area networks, local area networks, metropolitan area networks, and so on;
- Server(s) **112**, which typically include message server **114** and/or social network server **128**; and
- Message Database **116**, which includes messages (e.g., email messages) sent and/or received by users of integration system **108**; and
- Social Network Posts Database **118**, which includes social network posts (also called posts), sent and/or received by users of integration system **108**; optionally, the social network posts include blog posts, microblog messages, web posts, web comments, reposts, etc.).

In some embodiments, message database **116** includes email messages only, and social network posts database **118** includes various forms of social network posts other than emails. In other embodiments, social network posts database **118** include various forms of social network posts regardless of whether the social network posts are distributed additionally as email messages.

In some embodiments, social network server **128** includes post handling module **226** for receiving and presenting social network posts. In some embodiments, post handling module **226** works in conjunction with front end server **122** (FIG. **1**), which provides a user-interface (e.g., a web page) for displaying social network posts. In such embodiments, front end server **122** sends display information to client **102**, which enables client **102** to display a respective user a respective user-interface that includes one or more social network posts by users other than the respective user. In addition, the front end server **122** typically receives social network posts submitted by the respective user through the user-interface. In some embodiments, the front end server **122** parses the one or more social network posts (e.g., strips one or more portions of the header) prior to transmitting the one or more social network posts to post handling module **226**, which processes the one or more social network posts (e.g., updates a post history of the respective user).

In some embodiments, social network server **128** includes social network posts database module **228** which assists in storing and retrieving social network posts in social network posts database **118**. In some embodiments, social network posts database module **228** assists in updating social network posts or metadata associated with social network posts in social network posts database **118** (e.g., updating a score of a respective social network post in accordance with feedback from one or more other users, and/or associating one or more related social network posts, such as comments).

In some embodiments, social network server **128** includes presentation module **230**, which formats one or more social

network posts in social network posts database **118** for display at respective clients **102** (e.g., as a web page).

Optionally, social network server **128** includes one or more other module(s) **232**.

In some embodiments, message server **114** includes incoming/outgoing message module **214** for receiving or sending messages. Incoming/outgoing message module **214** typically uses network communication module **212** to communicate with other remote message servers used by other users (e.g., via POP or IMAP protocols).

In some embodiments, message server **114** includes message database module **216** which assists in storing and retrieving messages in message database **116**. In some embodiments, message database module **216** also assists in updating messages or meta data (e.g., last accessed time) associated with messages in message database **116**.

In some embodiments, message server **114** includes integration module **124** for integrating the functionality of message server **114** and social network server **128**. In some embodiments, integration module **124** includes social network server interface **218**, which is used to retrieve one or more social network posts stored in social network posts database **118** via social network server **128**. For example, integration module **124** is configured to send a request for one or more social network posts to social network server **128**, and social network server **128** is configured to, in response, retrieve and send to integration module **124** the one or more social network posts, or at least a subset thereof.

In some embodiments, message server **114** includes presentation module **220**, which formats one or more messages in message database **116** and one or more social network posts in social network posts database **118** for display at respective clients **102**. For example, presentation module **220** may generate a web page or XML document that includes messages and social network posts. In some embodiments, presentation module **220** is executed by the front end server **112** (FIG. **1**) instead of message server **114**. Therefore, in some embodiments, presentation module **220** is located in the front end server **112**. In some embodiments, presentation module **220** of message server **114** comprises presentation module **230** of social network server **230**, or vice versa.

Optionally, message server **114** includes one or more other module(s) **222**.

Each of the above identified servers, modules and interfaces corresponds to a set of instructions for performing one or more functions described above. These servers and modules (i.e., sets of instructions) need not be implemented as separate software programs, procedures or modules, and thus various subsets of these modules may be combined or otherwise re-arranged in various embodiments. In some embodiments, memory **206** or the computer readable storage medium of memory **206** stores a subset of the modules and data structures identified above. Furthermore, memory **206** or the computer readable storage medium of memory **206** stores additional modules and data structures not described above.

Notwithstanding the discrete blocks in FIGS. **1** and **2**, these figures are intended to be a functional description of some embodiments rather than a structural description of functional elements in the embodiments. One of ordinary skill in the art will recognize that an actual implementation might have the functional elements grouped or split among various components. In practice, and as recognized by those of ordinary skill in the art, items shown separately could be combined and some items could be separated. For example, in some embodiments, one or more of message database **116** and social network posts database **118** are part of or stored within server(s) **112**. In other embodiments, one or more of message database **116** and social network posts database **118** are implemented using one or more servers whose primary function is to store and process communication data, at least a subset of which may be located remotely from message server **114** and/or social network server **128**. In some embodiments, message database **116** includes social network posts database **118**, or vice versa. In some embodiments, message server **114** and social network server **128** are implemented in separate systems.

The number of servers used to implement integration system **108** and how features are allocated among them will vary from one implementation to another, and may depend in part on the amount of data stored by integration system **108**, and may also depend on the amount of data traffic that the system must handle during peak usage periods as well as during average usage periods. Moreover, one or more of the blocks (e.g., server(s) **112**, message database **116**, etc.) in FIG. **1** may be implemented on one or more servers designed to provide the described functionality. Although the description herein refers to certain features implemented in client **102** and certain features implemented in server(s) **112**, the embodiments are not limited to such distinctions. For example, features described herein as being part of server(s) **112** can be implemented in whole or in part in client **102**, and vice versa. In some embodiments, features described herein as being part of server(s) **112** can be implemented in whole or in part in multiple distributed servers.

FIG. **3** is a block diagram illustrating client **102**, also called a client system or a client device, in accordance with some embodiments. Clients **102** are configured for use by a subscriber (also herein called "the user") of integration system **108** or message server **114**. Client **102** includes user interface **300**, which typically includes display device **301**, and one or more input devices **303** such as a keyboard and a mouse or other pointing device. Optionally, input devices **303** include, or are implemented using a touch sensitive surface of display device **301**, or of a touch pad. As noted above, client **102** includes graphical user interface (GUI) **111**, which is displayed on display device **301**. Client **102** typically includes one or more processing units (sometimes called CPUs or processors) **302**, one or more network or other network communications interfaces **304**, memory **306**, and one or more communication buses **308** for interconnecting these components. Communication buses **308** may include circuitry (sometimes called a chipset) that interconnects and controls communications between system components.

Memory **306** includes high-speed random access memory, such as DRAM, SRAM, DDR RAM or other random access solid state memory devices; and typically includes non-volatile memory, such as one or more magnetic disk storage devices, optical disk storage devices, flash memory devices, or other non-volatile solid state storage devices. Memory **306** optionally includes one or more storage devices remotely located from the processor(s) **302**. Memory **306**, or alternately the non-volatile memory device(s) within memory **306**, comprises a non-transitory computer readable storage medium for storing information. In some embodiments, memory **306** or the computer readable storage medium of memory **306** stores the following programs, modules and data structures, or a subset thereof:

- Operating System **310**, which includes procedures for handling various basic system services and for performing hardware dependent tasks;
- Network Communication Module (or instructions) **312**, which is used for connecting client **102** to other computers (e.g., integration system **108** and/or other clients **102**) via network communications interface **304** and one

or more communications networks **106** (FIG. **1**), such as the Internet, other wide area networks, metropolitan area networks, local area networks, or a combination of such networks;

Web Browser Application **314**, which processes and initiates display of a web document (e.g., **320**) in GUI **111**; and

Data **318**, which includes web documents (e.g., **320**, etc.) and in some embodiments, posts data **120**.

Optionally, memory **306** includes additional applications. In some embodiments, web browser application **314** or an extension, plug-in or toolbar of web browser application **314** includes embedded instructions **316** that send requests for, and receives, one or more messages and/or one or more social network posts from integration system **108** (FIG. **1**).

Respective web document **320** is typically a webpage (or XML document or the like) received from integration system **108** for display of messages (e.g., email messages). The respective web document includes information for display in GUI **111**. In some embodiments, respective web document **320** includes embedded instructions for receiving document-related input from a computer user (e.g., draft email or inputs for social network posts) and for formatting web document **320** for display in GUI **111**.

Posts data **120** identifies one or more participants (e.g., sender(s) and/or receiver(s)) in emails sent or received by client **102** (i.e., emails sent or received by a respective user using client **102**). In some embodiments, posts data **120** includes information about social network posts currently and previously displayed by client **102**. This information is used to avoid or reduce repeated display of the same social network posts. In some embodiments, the information in posts data **120** is sent to integration system **108** in conjunction with a request for one or more social network posts, and integration system **108** selects the one or more social network posts in accordance with the information.

In some embodiments, posts data **120** is maintained while web browser application **314** is being executed by the one or more processing units (also called processors) **302** of client **102**. Optionally, posts data **120** is removed or cleaned when web browser application **314** is terminated. Optionally posts data **120** is removed or cleaned when the user of client **102** explicitly logs out of an online email service. Posts data **120** is described in detail with respect to FIG. **5**B.

FIG. **4** illustrates exemplary user interface **400** displayed in GUI **111** of client **102**, in accordance with some embodiments. User interface **400** includes a message page for displaying message content from a plurality of email messages (e.g., **410** and **412-1** through **412-3**) in a conversation thread. Email messages in the conversation thread typically have the same title (sometimes called the subject or subject line). In determining whether two emails have the same title, predefined prefixes, such as "Re:", "Fw:", and "Fwd:", variants thereof (e.g., all characters in capital letters or all characters in lower cases), and any combination thereof (e.g., "Re: Re: Re:" or "Re: FW:") is disregarded. For example, respective emails, each with respective titles: "Hello", "Re: Hello", "Re: Re: Hello", and "Fw: Hello" may be included in the same conversation thread. Typically, each email message in the conversation thread has one or more common participants (e.g., either as a sender or receiver). For example, messages **412-1** through **412-3** each have Brian, Rachel, me, Tom, and Sam as participants.

In FIG. **4**, the plurality of email messages includes email message **410** for which only a snippet (e.g., a portion of the email message **410**) is displayed. A snippet typically includes a predefined number of consecutive characters in the email message. In some embodiments, the predefined number is selected in accordance with the size (or resolution) of display **301** (FIG. **3**) and the size of the font displayed on display **301** for displaying the snippet. Alternatively, the snippet is generated in accordance with a requirement that the number of characters in the snippet falls within a predefined range. In some embodiments, the snippet comprises a one-line summary of the email message (e.g., words in the beginning of message **410** that fits into one line).

In some embodiments, the plurality of email messages includes at least one email message **412** for which message content is displayed in full, with or without quoted text. For example, if a reply email includes an original email as a quoted text, a display of the reply email may not include the original email for brevity, even when the reply email is displayed in full. Instead, the quoted text is elided and represented by a link that the user can select so as to display the quoted text.

User interface **400** also includes social network objects **420** (e.g., **420-1** and **420-2**). Each social network object **420** corresponds to a social network post. In some implementations, each social network object **420** includes at least a subset of text in the corresponding social network post. In some implementations, each social network object **420** includes an author identifier **422** (e.g., an author name, nickname, username, a thumbnail photo, or any other identification). For example, social network object **420-1** includes author identifier **422-1** for a user named "Brian," indicating that a social network post corresponding to social network object **420-1** is authored by the user "Brian." Social network object **420-2** includes an author identifier **422-2** for a user named "Sam," indicating that a social network post corresponding to social network object **420-2** is authored by the user "Sam." It is noted that "Brian" and "Sam" are participants in email messages **412-1** through **412-3** shown in FIG. **4**. For example, Brian is an author of message **412-1** and also a recipient of messages **412-2** and **412-3**. Sam is an author of message **412-2** and also a recipient of messages **412-1** and **412-3**.

In some embodiments, social network object **420-1** includes link **424-1** to a related webpage. In some embodiments, the link **424-1** is a hyperlink that includes a URL of the related webpage.

In some embodiments, a respective social network object (e.g., object **420-2**) includes rating icon **426-2** that can be selected to adjust the score for social network object **420-2** (e.g., a "like" or "+1" button). For example, in response to user selection of rating icon **426-2**, the score of social network object **420-2** is increased. Typically, the score of social network object **420-2** is displayed adjacent to rating icon **426-2**.

In some embodiments, a respective social network object **420-2** (e.g., object **420-2**) includes a comment icon **428-2** that can be selected to provide a comment on social network object **420-2** or a corresponding social network post. For example, in response to user selection of comment icon **428-2**, a comment input box (not shown) or a comment input page is displayed. In some embodiments, the number of comments on social network object **420-2** or a corresponding social network post is displayed adjacent to comment icon **428-2**.

In some embodiments, social network object **420** includes a timestamp (e.g., a timestamp indicating when a corresponding social network post was authored). For example social network object **420-1** includes a timestamp indicating that a corresponding social network post was authored 2 hours ago.

In some embodiments, a respective social network object **420** includes a graphical boundary (e.g., a perimeter, a background image or pattern having an outer boundary, etc.). In

other embodiments, a respective social network object **420** does not include a graphical boundary.

FIG. **5**A is a block diagram illustrating exemplary individual posts data **502**, in accordance with some embodiments.

Individual posts data **502** is stored in social network posts database **118** (FIG. **1**). Individual posts data **502** includes individual posts entries (or personal posts entries), for example entry **1** (**504-1**) through entry x (**504-***x*), where x represents the number of entries in individual posts data **502**. Each entry **504** is for a respective individual or respective user identifier (e.g., database **118** would include two entries **504** for a user who makes posts under two different user identifiers). A respective entry (e.g., entry **504-1**) includes a user identifier (e.g., **506**), such as a username, email address, etc. of the user who made or posted posts **508**. The respective entry (e.g., entry **504-1**) also includes posts (e.g., **508-1**). Posts (e.g., **508-1**) include one or more posts (e.g., **510-1** through **510-***y*) made by a user represented by a respective user identifier (e.g., **506-1**).

A respective post (e.g., **510-1**) may be a user's original post, or comment on or sharing of an existing post. In some embodiments, respective post **510** has one or more of: scope **512**, entity **514**, timestamp **516** and score **518**.

Scope **512**, sometimes called the access scope or publication scope, indicates users or one or more groups of users who may access respective post **510** and/or information about the respective post **510**. For example, scope **512** for a particular post includes a list of user identifiers (e.g., usernames), a list of one or more groups (e.g., a "family" group that typically includes one or more family members of a respective user), and/or a "public" scope, which indicates that anyone may access the respective post or information about the respective post.

Entity **514**, if included, may be the URL of the respective web page that is the subject of the post. In other words, entity **514** represents an entity annotated (or commented) by the respective post **510**. For example, when a user posts a comment about a video clip on a web page, an identifier of the web page that includes the video clip may be stored as entity **514** of the user post. In some embodiments, entity **514** may include the URL of the web page. Alternatively, entity **514** may be represented by an identifier that corresponds to the URL of the web page. For example, entity **514** may be a fixed length identifier (e.g., a hash of the URL of the web page, produced by applying a predefined hash function to the URL).

Timestamp **516** indicates the time when respective annotation **510** was posted or recorded.

Score **518** is or includes a value, which is typically a value indicative of popularity of the respective post **504**, in accordance with predefined popularity criteria. In other implementations score **518** includes a value determined in accordance with one or more predefined score metrics or score criteria. In some implementations, score **518** includes multiple values, each corresponding to different scoring criteria or a different score metric. I some embodiments, score **518** is or includes a value corresponding to a number to times the respective post **504** has been reposted, commented on, recommended (e.g., by user selection of a "like" or "+1" affordance), or responded to.

FIG. **5**B is a block diagram illustrating exemplary displayed posts data **120**, in accordance with some embodiments. In some embodiments, displayed posts data **120** is stored in client **102** (e.g., posts data **120**, FIG. **1**). Displayed posts data **532** include information regarding various posts displayed by client **102**, typically during while the web browser application (e.g., **314**, FIG. **3**) is being executed. Displayed posts data **532** includes displayed post entries **534**, for example entry **1** (**534-1**) through entry z (**534-***z*), where z represents the number of entries in displayed posts data **120**. A respective entry **534** includes a user identifier **536**. In some embodiments, the respective entry **534** includes one or more of: the number **538** of displayed posts (by the user identifier **536**), timestamp **540** of the last display of a post (by the user identifier **536**), and affinity **542**.

In some embodiments, the number **538** of displayed posts (by the user identifier **536**) corresponds to the number of times posts authored or posted by the user identifier **536** (e.g., "Brian") have been displayed at client **102**. In some embodiments, the number **538** of displayed posts corresponds to the number of times posts authored or posted by the user identifier **536** have been displayed at client **102** during a predefined period (e.g., past 12 hours). In some embodiments, the number **538** corresponds to a cumulative number of posts by the user identifier **536** that have been displayed at client **102** as adjusted by a predefined discount factor (e.g., the number is multiplied by an exemplary discount factor, such as 0.5, at every predefined time interval, such as at 12 AM everyday).

The timestamp **540** corresponds to the last (or most recent) display of a post authored or posted by the user identifier **536**.

Affinity **542** (e.g., the affinity **542-1** associated with entry **534-1** for posts associated with a respective user identifier **536-1**) is a value that represents an importance and/or frequency of communication between the contact, corresponding to user identifier **536**, and the respective user. Affinity **542** may be set by the user (e.g., by adding the respective contact to a particular group, such as "family," or by manually indicating that the respective contact is important). In some embodiments, affinity **542** for a respective contact is determined by a computer system without human intervention based on, for example, the frequency of communication between the user and the respective contact (e.g., a number of emails exchanged between the two in a predefined time period).

Optionally, the respective entry **534** may include additional information associated with the user identifier **536** or posts posted by the user identifier **536**.

It should be appreciated that although number **538**, timestamp **540**, and affinity **542** are illustrated as included in displayed posts data **120** of client **102** (FIG. **1**), one or more of number **538**, timestamp **540**, and affinity **542** may be stored in integration system **108** (FIG. **1**). For example, affinity **542** may be stored in integration system **108**, and in some embodiments, client **102** receives affinity **542** for a respective user identifier **536** from message server **114**.

FIGS. **6**A-**6**B are flowcharts representing method **600** of concurrently displaying message content and one or more social network objects, in accordance with some embodiments. The method is performed by (and at) a client device having one or more processors and memory storing one or more programs for execution by the one or more processors (e.g., client **102**, described above with reference to FIG. **3**).

As described below, method **600** allows integration of email messages and social network posts. By concurrently displaying email messages (or message content thereof) and one or more social network posts (or social network objects corresponding thereto), method **600** reduces the need to switch between a display of email messages and a display of social network posts. Furthermore, the displayed social network posts are by participants in the email messages, and therefore, the user may respond to, or comment on, the information in the social network posts without changing the display. Thus, method **600** reduces the time in navigating between the two displays, and provides a better human-machine interface.

In some embodiments, in response to a user input initiating a display of the conversation thread (**602**), the client displays message content and concurrently displays one or more social network objects. For example, the user input initiating the display of the conversation thread may include user selection of a conversation (e.g., a user interface object representing the conversation) in a displayed list of conversations. Selection of the conversation in the list of conversations causes a request to be sent to a server system (e.g., integration system **108**) for a list of messages, including message content from one or email messages in the selected conversation, in the user's email account. In response, the server system sends, to the requesting client, message content from one or more email messages in the conversation thread. In another example, the user input initiating the display of the conversation thread may include, while displaying message content from a first set of one or more email messages in a view other than a conversation view, a user selection of a user interface object that is configured to display the message content from a second set of one or more email messages in the conversation thread. The view other than a conversation view may include a sequential view where the one or more email messages are sequentially arranged based on when respective email messages are received or authored.

The client displays (**604**) message content (received from the server system) from one or more email messages in a conversation thread (e.g., email messages **410** and **412-1** through **412-3**, FIG. **4**). In some embodiments, the displayed message content includes a snippet of a message, the entire message body (also called the full content of the respective email message), or the portion of a message body that fits within an available display region. As used herein, the term "email message" means a message sent from an author to one or more specific email addresses. The email message is generally delivered to every valid, active email address listed in the to field, cc field and bcc field of the email address.

In contrast, social network posts, also called posts, have specified access rights, and are typically not sent to every person with the right to access the posts. The client displays (**606**), concurrently with the message content from the one or more email messages, one or more respective social network objects. Each displayed social network object has one or more selection portions (e.g., author **422**, rating icon **426**, comment icon **428**, and link **424**, FIG. **4**), and each displayed social network object corresponds to a respective post by a respective participant in the conversation thread (e.g., social network objects **420-1** and **420-2** corresponding to social network posts authored by participants in the conversation thread, Brian and Sam, FIG. **4**). Each social network object includes a snippet of text, or the entire text in the corresponding social network post. Each social network object typically includes a name of the author of a corresponding social network post (e.g., a real name, user name, nick name, etc.). In some embodiments, when the corresponding social network post is posted using a user name, the user name is converted to a real name in the respective social network object. The social network posts may be stored in a social network posts database (e.g., **118**, FIG. **1**).

As used herein, the term "author" is used with respect to a social network post to describe that a respective post is posted by a respective user. Therefore, the respective user may author the respective post by commenting on, or sharing or reposting, a post originally written by another user. In other circumstances, content of a respective post contains original text authored by the respective user.

In some embodiments, the respective post corresponding to each displayed social network object satisfies (**608**) a recency criteria (e.g., posts authored within a predefined interval, such as past 24 hours).

In some embodiments, the respective post corresponding to each displayed social network object is (**610**) a most recent post by the respective participant in the conversation thread (e.g., when the respective participant has authored two social network posts, the most recent post is selected for generating a corresponding social network object).

In some embodiments, the number of displayed social network objects is determined (**612**) in accordance with a number of participants in the conversation thread. For example, the number of displayed social network objects (e.g., **420**, FIG. **4**) typically does not exceed the number of participants in the conversation thread. In some embodiments, the number of displayed social network objects is determined in accordance with the number of participants in the conversation thread other than the user of the client (e.g., the number of participants in a conversation thread involving Brian, Rachel, Tom, Sam, and the user "me" (FIG. **4**) is four).

In some embodiments, the respective posts corresponding to the displayed social network objects are (**614**) posts by one or more authors of email messages in the conversation thread. In some implementations, the authors are considered to be "active participants" in the conversation, and the method **600** displays a recent post (if any) for each active participant other than the user of the client.

In some embodiments, the respective posts corresponding to the displayed social network objects are selected in accordance with respective times when posts by respective participants were displayed last (e.g., when a respective participant's post was displayed recently, the respective participant's posts are not selected so that other less-recently-shown participants' posts can be displayed).

In some embodiments, the respective posts corresponding to the displayed social network objects are selected in accordance with the number of times posts by respective participants were displayed (e.g., when the respective participant's posts have been shown more than other participants' posts, the respective participant's posts are not selected so that other less-shown participants' posts can be displayed).

In response to user selection of a first portion of a respective social network object (e.g., author identifier **422**, FIG. **4**) of the one or more displayed social network objects, the client displays (**616**, FIG. **6**B) a respective social network page of the participant who authored the respective post corresponding to the respective social network object. It is noted that the first portion of the social network object, and each of the other portions mentioned below, is an affordance. User selection of a respective affordance typically causes a corresponding request to be sent to a server system (e.g., integration system **108**), which sends corresponding in information to the client for display. Alternatively, in some circumstances, user selection of a particular affordance may cause information locally stored at the client to be displayed.

In some embodiments, in response to user selection of a second portion (e.g., a text portion of social network object **420**, such as "This is the most awesome video I've watched in weeks. It is not the kind of video that I" for social network object **420-2**, FIG. **4**) of the one or more selectable portions of the respective social network object, the client displays (**618**) the entire post corresponding to the respective social network object. In some embodiments, the entire post corresponding to the respective social network object is displayed in a new window at the client device.

In some embodiments, in response to user selection of a third portion (e.g., rating icon **426-2**, FIG. **4** and/or a corresponding score) of the one or more selectable portions of the

respective social network object, the client adjusts (**620**) a score of the post corresponding to the respective social network object (e.g., increases a value in score **518**, FIG. **5**A). For example, the client adjusts the score by sending a message to integration system **108**, which updates the score of the post corresponding to the respective social network object.

In some embodiments, in response to selection of a fourth portion of the one or more selectable portions of the respective social network object (e.g., comment icon **428-2**, FIG. **4** and/or a corresponding number of comments), the client displays (**622**) the social network page and a predefined area for user entry of a comment.

FIGS. **7**A-**7**B are flowcharts representing method **700** of preparing a set of qualifying posts and message content for concurrent display, in accordance with some embodiments. The method is performed by (and at) a server system having one or more processors and memory storing one or more programs for execution by the one or more processors (e.g., integration system **108**, described above with reference to FIG. **2**).

The system receives (**702**) from a client device a request. The request includes a request for message content from one or more email messages in a conversation thread (e.g., a request for an email web page or a request to refresh/update the email web page).

In some embodiments, the request received from the client device includes (**704**) a request for information corresponding to one or more posts authored by one or more participants in the conversation thread. As noted above, participants in a conversation thread includes authors and recipients of messages in the conversation thread. In some embodiments, the request received from the client device includes a request for information corresponding to one or more posts authored by one or more authors (instead of all the participants) of messages in the conversation thread.

The system responds (**706**) to the request by identifying (**708**) the message content from the one or more email messages in the conversation thread. For example, the system first retrieves from message database **116** one or more messages (e.g., messages **410** and **412-1** through **412-3**, FIG. **4**) in the conversation thread. The conversation thread is related to the user associated with the client device (e.g., one or more messages are sent by or sent to the user associated with the client device).

The system identifies (**710**) candidate authors in accordance with the request. The candidate authors are typically a subset of the participants in the conversation thread identified by the request.

In some embodiments, identifying the candidate authors includes (**712**) identifying one or more candidate authors specified by the received request. For example, the request from the client device may include a subset of one or more user identifiers (e.g., **536**, FIG. **5**B) in the displayed posts data **120** stored by the requesting client. Thus, in some embodiments, the candidate authors specified by the received request are selected by the client device based on information available to the client device (e.g., displayed posts data **120**, FIG. **1**). In some embodiments, in response to receiving the candidate authors specified by the received request, the system determines whether social network posts database **118** (FIG. **1**) includes posts by the candidate authors specified by the received request, and selects a subset of the candidate authors specified by the received request. In some embodiments, identifying the candidate authors includes identifying one or more candidate authors specified by the client device (e.g., the one or more candidate authors may be specified in the received request or via a separate communication).

In some embodiments, identifying the candidate authors includes (**714**) identifying one or more authors of messages in the conversation thread (e.g., Tom, Brian, and Sam who are authors of email messages **410** and **412-1** through **412-3** in FIG. **4**). In some embodiments, identifying the candidate authors includes identifying one or more authors of messages in the conversation thread who are specified by the client device. In some cases, the client device may select and specify only some authors out of all authors of messages in the conversation thread (e.g., the client device may select authors based on their respective affinity **542** with the user, FIG. **5**B).

In some embodiments, identifying the candidate authors includes (**716**) identifying one or more participants in the conversation thread (e.g., Tom, Brian, Rachael, and Sam who are participants in the conversation thread, FIG. **4**). In some embodiments, identifying the candidate authors includes identifying one or more participants in the conversation thread who are specified by the client device. In some cases, the client device may select and specify only some participants out of all participants in the conversation thread (e.g., most relevant users).

The server obtains (**718**) qualifying posts by the candidate authors, where the qualifying posts satisfy predefined criteria. For example, the server identifies one or more user identifiers **506** (FIG. **5**A) that correspond to the candidate authors, identifies one or more candidate posts **510** (FIG. **5**A) corresponding to each identified user identifier **506**, and retrieves one or more qualifying posts **510** among the one or more candidate posts **510**.

In some embodiments, the predefined criteria includes (**720**) that the qualifying posts are accessible by a user associated with the client device. For example, the server determines whether the access scope **512** (FIG. **5**A) of a respective candidate post **510** (FIG. **5**A) includes the user associated with the client (or scope **512** of the respective candidate post **510** is set as "public").

In some embodiments, the predefined criteria includes (**722**) a recency criteria. For example, the server determines whether timestamp **516** (FIG. **5**A) of the respective candidate post **510** (FIG. **5**A) is within a predefined time period (e.g., within last N days).

In some embodiments, the predefined criteria includes (**724**) that each qualifying post is a most recent post by a corresponding candidate author. For example, the system may select the most recent post among multiple posts **510** (FIG. **5**A) for a respective user identifier **506** in accordance with corresponding timestamps **516**.

The system selects (**726**) a subset of the qualifying posts (e.g., the server selects a predefined number of qualifying posts out of all qualifying posts).

As noted above, in some embodiments, the candidate authors are participants in the conversation thread, and selecting the subset of the qualifying posts includes identifying a maximum number of the qualifying posts to be selected in accordance with a number of participants in the conversation thread (**728**). In some embodiments, the number of selected qualifying posts matches the number of participants in the conversation thread (e.g., up to one qualifying post for each participant. In some embodiments, the number of participants excludes the user associated with the client device. In some embodiments, the number of participants for whom posts are selected comprises a number of participants who have corresponding posts that meet the predefined criteria (qualifying participants).

In some embodiments, the candidate authors are participants in the conversation thread, and the subset of the qualifying posts includes identifying a maximum number of the

qualifying posts to be selected in accordance with a number of distinct message authors in the conversation thread (**730**). In some implementations, the number of selected qualifying posts matches the number of distinct authors of email messages in the conversation thread (e.g., one qualifying post for each distinct author), excluding the user associated with the client device.

In some embodiments, the server selects (**732**) the subset of the qualifying posts in accordance with a number of times one or more posts from a respective candidate author has been displayed at the client device. In some embodiments, the server receives the number **538** (FIG. **5**B) of times one or more posts by a respective user identifier **536** has been displayed at the client device (e.g., **102**, FIG. **1**), and selects qualifying posts by user identifiers that have the least number **538** of displayed posts.

In some embodiments, selecting the subset of the qualifying posts includes selecting a subset of the qualifying posts in accordance with a predefined number of qualifying posts. For example, when the predefined number is 3 and the number of qualifying posts is 3 or more, the system selects 3 qualifying posts. When the number of qualifying posts is less than 3, the system selects all qualifying posts.

In some embodiments, each qualifying post has a selection score, which corresponds to a weighted-average of component scores, in accordance with a predefined set of weights to be applied to a predefined set of component scores. Each component score corresponds to one or more values stored at the server system (e.g., scope **512**, timestamp **516**, and/or score **518**) and/or one or more values stored at the client device (e.g., number of displayed posts **538**, timestamp of last display **540**, and/or affinity **542**). In some embodiments, selecting the subset of the qualifying posts includes selecting a subset of the qualifying posts in accordance with the selection score.

In some embodiments, selecting the subset of the qualifying posts includes selecting a subset of the qualifying posts in accordance with one or more predefined tie breaker rules. For example, when two or more candidate posts have the same selection score, at least a candidate post authored by an author who has authored the most recent email message in the conversation thread between the authors of the two or more candidate posts with the same selection score is selected.

The server prepares (**734**) the selected subset of the qualifying posts and the message content for concurrent display at the client device. For example, the server prepares a webpage (or an XML file) that includes the selected subset of the qualifying posts and the message content (e.g., the webpage that is displayed as user interface **400** in FIG. **4**), and sends the webpage to the client device for display. In some embodiments, the server prepares the webpage using presentation module **220** (FIG. **2**).

The foregoing description, for purpose of explanation, has been described with reference to specific embodiments. However, the illustrative discussions above are not intended to be exhaustive or to limit the invention to the precise forms disclosed. Many modifications and variations are possible in view of the above teachings. The embodiments were chosen and described in order to best explain the principles of the invention and its practical applications, to thereby enable others skilled in the art to best utilize the invention and various embodiments with various modifications as are suited to the particular use contemplated.

What is claimed is:

1. A method, performed by a server having one or more processors and memory storing one or more programs for execution by the one or more processors, comprising:

at the server:

receiving from a client device a request, the request comprising a request for message content from a plurality of email messages in a conversation thread; and

responding to the request by:

identifying the message content from the plurality of email messages in the conversation thread;

identifying a plurality of candidate authors in accordance with a plurality of message authors in the conversation thread identified by the request;

obtaining a plurality of qualifying social network posts by the plurality of candidate authors, the plurality of qualifying social network posts satisfying predefined criteria, wherein the plurality of qualifying social network posts are distinct from the conversation thread and distinct from email messages and include social network posts of a plurality of distinct authors;

selecting a subset of the plurality of qualifying social network posts, including a plurality of social network posts by a plurality of distinct candidate authors of the plurality of candidate authors; and

preparing the selected subset of the plurality of qualifying social network posts and the message content for display at the client device.

2. The method of claim **1**, wherein the request received from the client device further comprises a request for information corresponding to one or more social network posts authored by one or more participants in the conversation thread.

3. The method of claim **1**, wherein identifying the plurality of candidate authors comprises identifying two or more candidate authors specified by the received request.

4. The method of claim **1**, wherein the predefined criteria includes that the qualifying social network posts are accessible by a user associated with the client device.

5. The method of claim **1**, wherein the predefined criteria includes a recency criteria.

6. The method of claim **1**, wherein the predefined criteria includes that each qualifying social network post is a most recent social network post by a corresponding candidate author.

7. The method of claim **1**, wherein the candidate authors are participants in the conversation thread, and selecting the subset of the qualifying social network posts comprises identifying a maximum number of the qualifying social network posts to be selected in accordance with a number of participants in the conversation thread.

8. The method of claim **1**, wherein the candidate authors are participants in the conversation thread, and selecting the subset of the qualifying social network posts comprises identifying a maximum number of the qualifying social network posts to be selected in accordance with a number of distinct message authors in the conversation thread.

9. The method of claim **1**, further comprising selecting the subset of the qualifying social network posts in accordance with a number of times one or more social network posts from a respective candidate author have been displayed at the client device.

10. The method of claim **1**, wherein each qualifying social network post corresponds to a respective social network object for display at the client device, the method further comprising:

in response to receiving from the client device a selection of a respective affordance, wherein a respective affor-

dance corresponds to a portion of a respective social network object, causing to be performed at the client device:

displaying a respective social network page of the candidate author corresponding to the respective social network object, or

adjusting a score of the social network post corresponding to the respective social network object.

11. A computer system, comprising:

one or more processors; and

memory storing one or more programs for execution by the one or more processors, the one or more programs including instructions for:

receiving from a client device a request, the request comprising a request for message content from a plurality of email messages in a conversation thread; and

responding to the request by:

identifying the message content from the plurality of email messages in the conversation thread;

identifying a plurality of candidate authors in accordance with a plurality of message authors in the conversation thread identified by the request;

obtaining a plurality of qualifying social network posts by the plurality of candidate authors, the plurality of qualifying social network posts satisfying predefined criteria, wherein the plurality of qualifying social network posts are distinct from the conversation thread and distinct from email messages and include social network posts of a plurality of distinct authors;

selecting a subset of the plurality of qualifying social network posts, including a plurality of social network posts by a plurality of distinct candidate authors of the plurality of candidate authors; and

preparing the selected subset of the plurality of qualifying social network posts and the message content for display at the client device.

12. The system of claim **11**, wherein the request received from the client device further comprises a request for information corresponding to one or more social network posts authored by one or more participants in the conversation thread.

13. The system of claim **11**, wherein each qualifying social network post corresponds to a respective social network object for display at the client device, the method further comprising:

in response to receiving from the client device a selection of a respective affordance, wherein a respective affordance corresponds to a portion of a respective social network object, causing to be performed at the client device:

displaying a respective social network page of the candidate author corresponding to the respective social network object, or

adjusting a score of the social network post corresponding to the respective social network object.

14. The system of claim **11**, wherein identifying the plurality of candidate authors comprises identifying two or more candidate authors specified by the received request.

15. The system of claim **11**, wherein the predefined criteria includes a recency criteria.

16. A non-transitory computer readable storage medium storing one or more programs configured for execution by one or more processors of a computer system, the one or more programs comprising instructions for:

receiving from a client device a request, the request comprising a request for message content from a plurality of email messages in a conversation thread; and

responding to the request by:

identifying the message content from the plurality of email messages in the conversation thread;

identifying a plurality of candidate authors in accordance with a plurality of message authors in the conversation thread identified by the request;

obtaining a plurality of qualifying social network posts by the plurality of candidate authors, the plurality of qualifying social network posts satisfying predefined criteria, wherein the plurality of qualifying social network posts are distinct from the conversation thread and distinct from email messages and include social network posts of a plurality of distinct authors;

selecting a subset of the plurality of qualifying social network posts, including a plurality of social network posts by a plurality of distinct candidate authors of the plurality of candidate authors; and

preparing the selected subset of the plurality of qualifying social network posts and the message content for display at the client device.

17. The computer readable storage medium of claim **16**, wherein the request received from the client device further comprises a request for information corresponding to one or more social network posts authored by one or more participants in the conversation thread.

18. The computer readable storage medium of claim **16**, wherein each qualifying social network post corresponds to a respective social network object for display at the client device, the method further comprising:

in response to receiving from the client device a selection of a respective affordance, wherein a respective affordance corresponds to a portion of a respective social network object, causing to be performed at the client device:

displaying a respective social network page of the candidate author corresponding to the respective social network object, or

adjusting a score of the social network post corresponding to the respective social network object.

19. The computer readable storage medium of claim **16**, wherein identifying the plurality of candidate authors comprises identifying two or more candidate authors specified by the received request.

20. The computer readable storage medium of claim **16**, wherein the predefined criteria includes a recency criteria.

21. The computer readable storage medium of claim **16**, wherein the predefined criteria includes that the qualifying social network posts are accessible by a user associated with the client device.

22. The computer readable storage medium of claim **16**, wherein the predefined criteria includes that each qualifying social network post is a most recent social network post by a corresponding candidate author.

23. The computer readable storage medium of claim **16**, wherein the candidate authors are participants in the conversation thread, and selecting the subset of the qualifying social network posts comprises identifying a maximum number of the qualifying social network posts to be selected in accordance with a number of participants in the conversation thread.

24. The computer readable storage medium of claim **16**, wherein the candidate authors are participants in the conversation thread, and selecting the subset of the qualifying social network posts comprises identifying a maximum number of

the qualifying social network posts to be selected in accordance with a number of distinct message authors in the conversation thread.

25. The computer readable storage medium of claim **16**, where the one or more programs further comprise instructions for selecting the subset of the qualifying social network posts in accordance with a number of times one or more social network posts from a respective candidate author have been displayed at the client device.

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